

[0138] In embodiments of the present invention, the geographic position of portable electronic device 400 may be determined using motion detecting component 425 in conjunction with position determining component 420. For example, position determining component 420 may determine the geographic position (e.g., latitude and longitude) of portable electronic device 400 when located at first position 601. This data is input to navigation controller 750 via geographic position input signal receiver 740. Then, when portable electronic device 400 is moved to second position 602, motion detecting component 425 determines the vector (e.g., 605) between first position 601 and second position 602. This data is input to navigation controller 750 via motion input signal receiver 710. Using position deriver 755, navigation controller 750 then determines the geographic position (e.g., latitude and longitude) of portable electronic device 400 at second position 602 by combining the latitude and longitude data from first position 601 in conjunction with vector 605. In embodiments of the present invention, portable electronic device 400 may determine its geographic position automatically upon determining that it has been moved beyond a threshold distance. In one embodiment, this determination may be made by motion detecting component 425. For example, if motion detecting component 425 determines that portable electronic device 400 had been moved 10 meters, it may be assumed that the user is no longer trying to control which portion of data 620 is being displayed. Thus, portable electronic device 400 may automatically begin determining its geographic position in response to determining that it has moved beyond a threshold distance. It is appreciated that this threshold distance may be a pre-set or user determined parameter in embodiments of the present invention.

[0139] The combination of a motion detecting component (e.g., 425) in conjunction with a GNSS-based position determining component (e.g., 420) is advantageous in situations in which the GNSS satellite signals may be obscured. For example, if portable electronic device 400 is moved indoors, or beneath a tree, the radio signals from orbiting satellites may be fully or partially blocked. As determining the geographic position of portable electronic device 400 may take far longer, or become entirely impossible. However, embodiments of the present invention the geographic position of portable electronic device 400 may still be determined when the signal from the GNSS satellites is obscured using data from motion detecting component 425.

[0140] In embodiments of the present invention, portable electronic device 400 may also determine when it is being dropped and initiate a shut-down routine in response. For example, motion detecting component 425 may determine that portable electronic device 400 has moved downward along Z-axis 605c beyond a threshold distance and/or in excess of a threshold rate, it may generate a signal which indicates that portable electronic device 400 is being dropped. In response to receiving this signal, shut-down initiator 795, or processor 402 may initiate a shut-down routine to reduce the damage incurred by portable electronic device 400 when it is dropped.

[0141] Also shown in FIG. 7 is an input verifier 407a. As described above, input verifier 407a is for allowing a user to indicate when motion of portable electronic device 400 is to be considered an input for displaying a second portion of accessed data. This prevents system 700 from interpreting movement of the user as an input event, as opposed to a movement of system 700 itself. For example, system 700 may

interpret a detected movement as an input to display a second portion of accessed data, or to display a second instance of data, etc. However, if the user of system 700 is seated in a moving vehicle, boat, airplane, or is simply operating system 700 while walking, the movement of the user could be interpreted as an input. This could even occur when the user is not actually intentionally moving system 700 in order to initiate a desired task. In other words, without some indication that a given motion of system 700 is in fact an input event, unintentional movement of system 700 could be interpreted as an input.

[0142] As a result, embodiments of the present invention utilize input verifier 407a to facilitate distinguishing between a valid input event and a stray, or unintended, movement of system 700. In one embodiment, a user depresses a button while making a valid input motion of system 700. In so doing, system 700 interprets detected movements as user input while the button is depressed. In response, correlator 720 will determine which portion of accessed data is to be displayed due to the detected movement. When the user releases the button, correlator 720 will not interpret detected movement as a valid input event. In another embodiment, the user depresses the button and releases it to indicate when valid input motion of system 700 is occurring and depresses and releases the button again to indicate when detected movement of system 700 is not a valid input event.

[0143] In another embodiment, when a user depresses a button (e.g., input verifier 407a) system 700 “freezes” the display of output display generator 730. Thus, any detected movement of system 700 will not result in a change of the displayed data shown by, for example, display device 406. When the user wants to indicate a valid input event, the user depresses the button again to indicate to system 700 that detected motion is to be considered a valid input event.

[0144] In another embodiment, the user utilizes a second motion detecting component in communication with system 700 to indicate when the user is in motion. For example, a user of system 700 may wear or carry a peripheral device (e.g., 410 of FIG. 4) comprising an accelerometer coupled with a Bluetooth device which is communicatively coupled with I/O signal unit 409. Alternatively, the accelerometer may be a component of another electronic device such as a cellular phone, PDA, etc. When the accelerometer of the peripheral device detects movement of the user, this detected movement may be subtracted from the motion detected by motion detecting component 425 in order to determine whether the user is moving, or if the user is moving system 700 as a valid input event.

[0145] FIG. 8 is a perspective view of a portable electronic device used in accordance with embodiments of the present invention. In the embodiment of FIG. 8, a user has moved portable electronic device 400 from a substantially horizontal orientation 810 to a substantially vertical orientation 820 with reference to the Earth's surface. In embodiments of the present invention, this movement is detected by orientation detection device 435 which generates a signal indicating the orientation of portable electronic device 400 to, for example, data accessor 790 via orientation signal receiver 760. In embodiments of the present invention, in response an indication that portable electronic device has been moved from a substantially horizontal orientation to a substantially vertical orientation, or vice versa, data accessor 790 will cause a second instance of data to be displayed.